

Date: Friday, 01/05/2009 10:02:43 AM
 User: Jean-Luc Menard

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BRACKET ASSEMBLY
Job Number	: 47647		
Estimate Number	: 10281		
P.O. Number	:	Part Number	: D3183043
This Issue	: 01/05/2009 S.O. No. :	Drawing Number	: D3183 REV C1
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: // Type : MACHINED PARTS	Drawing Revision	: C1
Previous Run	: 46030	Material	:
Written By	: <u>ml 09-05-01</u>	Due Date	: 08/05/2009 Qty: 6 Um: Each
Checked & Approved By	:		
Comment	: Est Rev: Pick: A 04.02.18 New issue KJ/DS Est Rev: B Changed Mat Size 08-06-26 JLM Verified By: EC		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M174B1500X02250	17-4 SS Bar 1.50 X2.250
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Comment: Qty.: 0.4812 f(s)/Unit Total : 2.8873 f(s)
 Material: 17-4 SS Bar per AMS 5604/5643
 (M17-4-B1.500x02.25)
 Identify for D3183-043
 Batch: M108309

ml 09/05/01

⑥

2.0	BAND SAW	BAND SAW
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Comment: BAND SAW
 Cut blanks: (1.500" x 2.250") 5.500" long

ml 09/05/01

⑥

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3183-3 as per Folio FA322 and Dwg D3183
 Identify as D3183-3

2-Deburr

3-Scribe batch number

ml 09/05/02

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

ml 09/05/02

⑥

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 47647

Part Number: D3183043

Job Number:



Seq. #:	Machine Or Operation:	Description :
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5.0	QC8	SECOND CHECK
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Comment: SECOND CHECK

J.L 09/05/04

6.0	D312121	Bolt
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6A

Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number Description Batch
2 D3121-21 Bolt 46739

9/5/5

7.0	D3183045	Bearing Assembly
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5P
6A

Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick:

Qty Part Number Description Batch
2 D3183-045 Bearing Ass 47551

10
Lalaland

9/5/5

B47756
EB09/05/12

5P

8.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
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P10

Comment: SMALL & MEDIUM FAB RESOURCE 1
Assemble D3183-043 as per Dwg D3183.

EB09/05/12

5

9.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

8 09/05/12

10.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST236

EB09/05/12

11.0	QC21	FINAL INSPECTION/W/O RELEASE
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Comment: FINAL INSPECTION/W/O RELEASE

09/05/13

Job Completion



MF
09-05-13

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-043 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: P Date: 09/05/14
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>47647</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>9/5/14</u>	<u>#80</u>	<u>During assembly Qty ④ Bracker has a spigot too large. Measure 0.397" should be 0.392".</u>	<u>[Signature]</u>	<u>unable to re machine so scrap and destroy no Replace Qty ④</u>	<u>EP 09/05/06</u>	<u>S 09/05/12</u>	<u>[Signature]</u>	<u>S 09/05/12</u>
		<u>R.C. wasn't checked during machining Lack of Attention</u>	<u>[Signature]</u>	<u>AND Qty ④ Bracker AS D3183-043 . unable to remain</u>	<u>EP 09/05/06</u>	<u>S 09/05/12</u>	<u>[Signature]</u>	<u>S 09/05/12</u>

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 47647
Description: Bracket		Part Number: D3183-3
Inspection Dwg: D3183	Rev: C1	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	.190	/			
R0.063	+/-0.010	.063	-			
0.182	+/-0.010	.181	✓			
0.070	+/-0.010	.075	✓			
0.100	+/-0.010	.106	✓			
Ø0.201 x 0.100	+/-0.010	.201 x .098	✓			
0.182	+/-0.010	.184	/			
5.32	+/-0.030	5.328	✓			
5.036	+/-0.010	5.036	✓			
2.120	+/-0.010	2.120	✓			
1.290	+/-0.010	1.289	✓			
0.365	+/-0.010	.368	✓			
0.218	+/-0.010	.214	✓			
1.030	+/-0.010	1.030	✓			
1.90	+/-0.030	1.890	✓			
1.012	+/-0.010	1.012	✓			
Ø0.201 x 0.100	+/-0.010	.203 x .097	✓			
0.786	+/-0.010	.789	✓			
Ø0.392	+0.002/-0.000	.393	✓			
R0.19	+/-0.030	.190				
3.954	+/-0.010	3.954	✓			
0.162	+/-0.010	.160				
R0.19	+/-0.030	.190	✓			
R0.25	+/-0.030	.250	✓			
4.26	+/-0.030	4.266	✓			
2.080	+/-0.030	2.080	-			
1.155	+/-0.010	1.155	-			
0.162	+/-0.010	.157	✓			
0.36	+/-0.030	.360	✓			
0.615	+/-0.010	.615	✓			
0.435	+/-0.010	.437	/			
0.200	+/-0.010	.205	/			
0.381	+/-0.010	.381	/			
0.032	+/-0.010	.032	/			

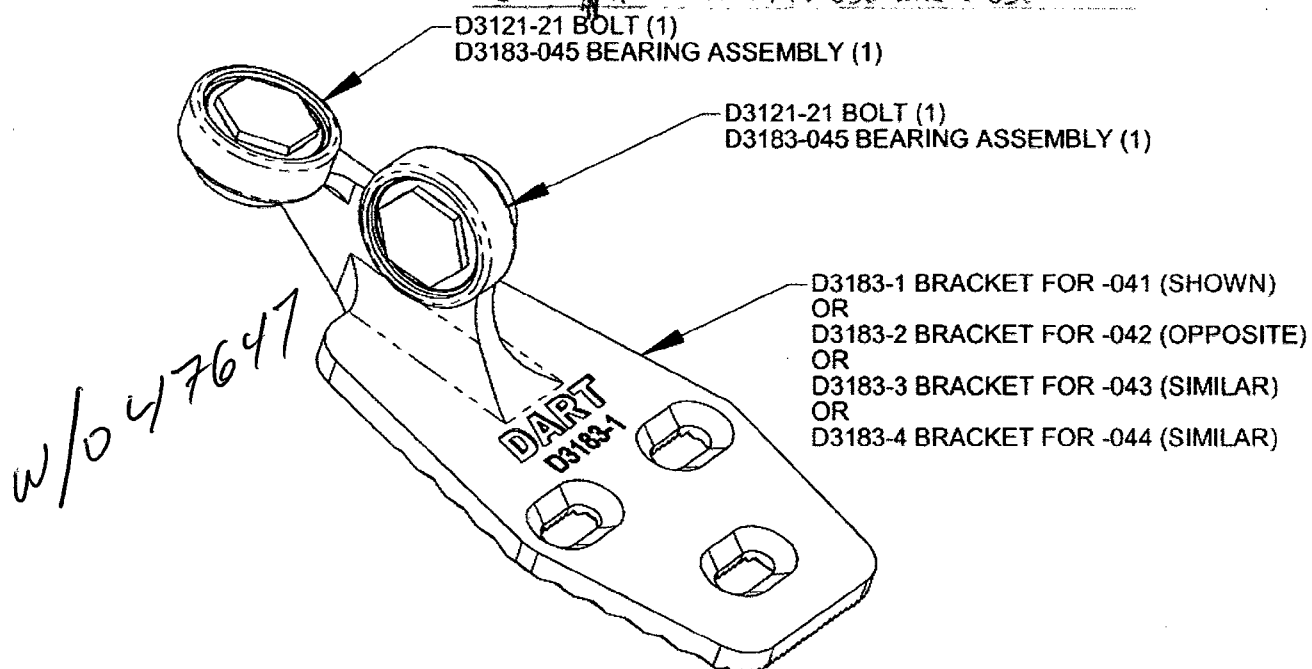
Measured by: SP	Audited by: JL	Prototype Approval:	N/A
Date: 09/05/02	Date: 09/05/04	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-043	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	06.03.09	Dwg Rev update	KJ/JLM	
D	08.01.28	0.182 dimension removed	KJEC/DD	

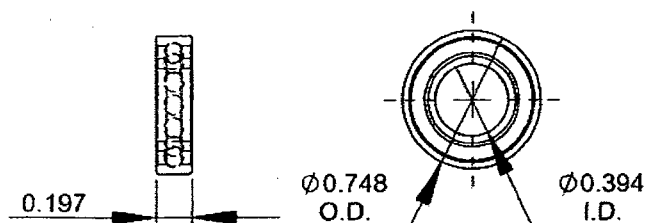


DESIGN #		DRAWN BY CP		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #		APPROVED #		DRAWING NO. D3183	REV. C SHEET 1 OF 4
DATE 04.02.17			TITLE BRACKET ASSEMBLY SCALE 1:1		
A	03.01.24		NEW ISSUE		
B	03.06.17		REMOVE BEARING; 1.012 WS 0.882		
C	04.02.17		ADD -045/-9; 0.182 WAS 0.431		
C1	# 04.11.09		0.830 WAS 0.850		

RELEASED
04.03.01

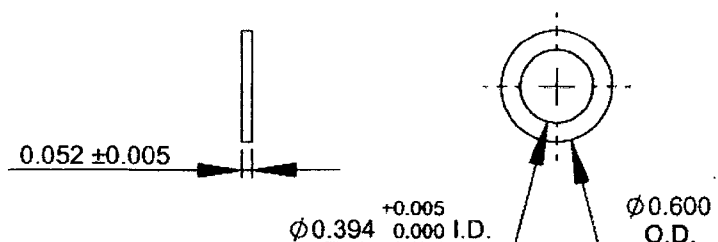


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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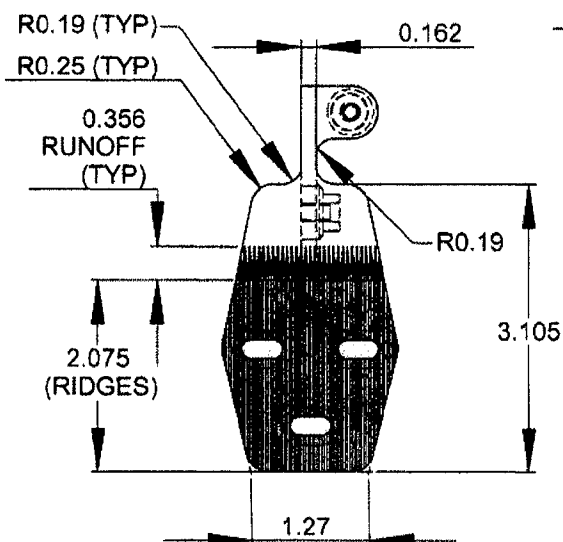
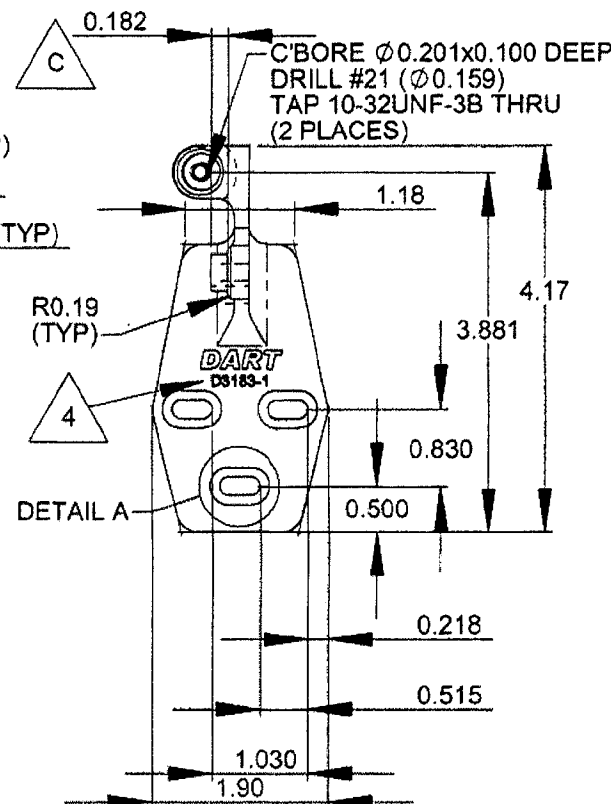
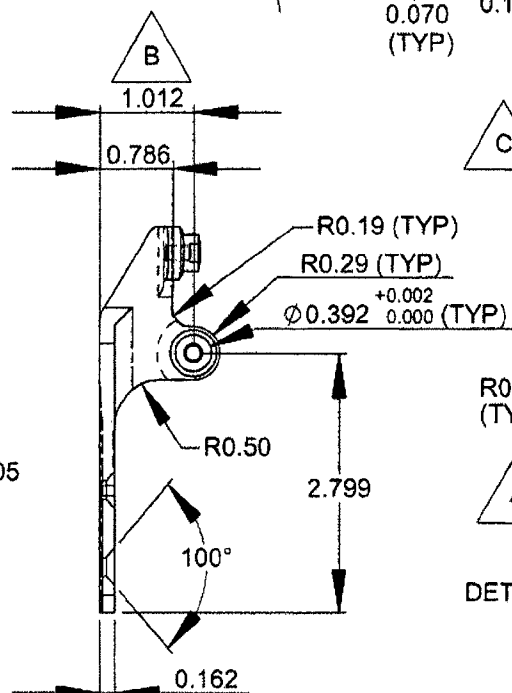
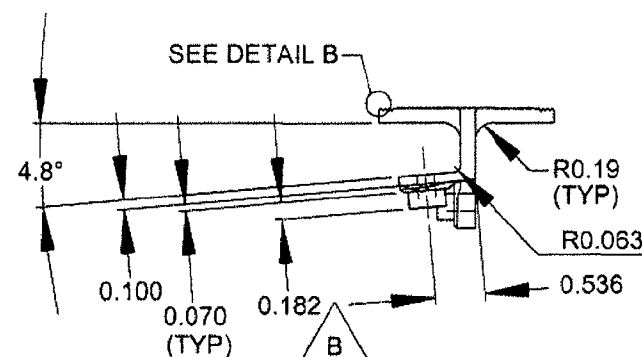
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		HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. C
		D3183	SHEET 2 OF 4
DATE		TITLE	SCALE
04.02.17		BRACKET ASSEMBLY	1:2

RELEASED
04.03.01



D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

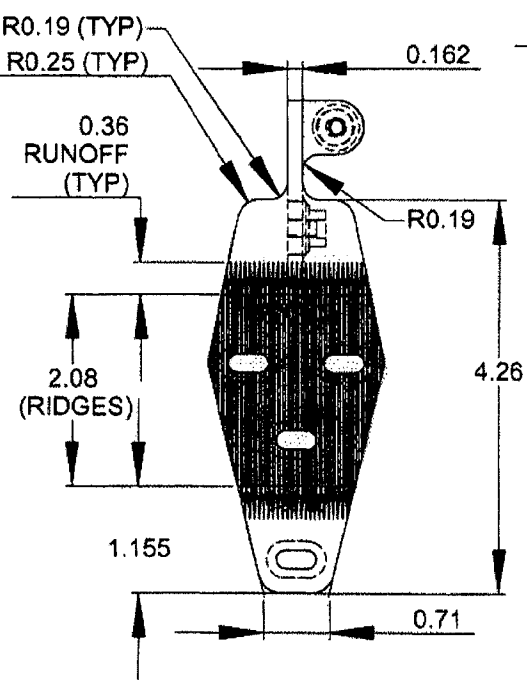
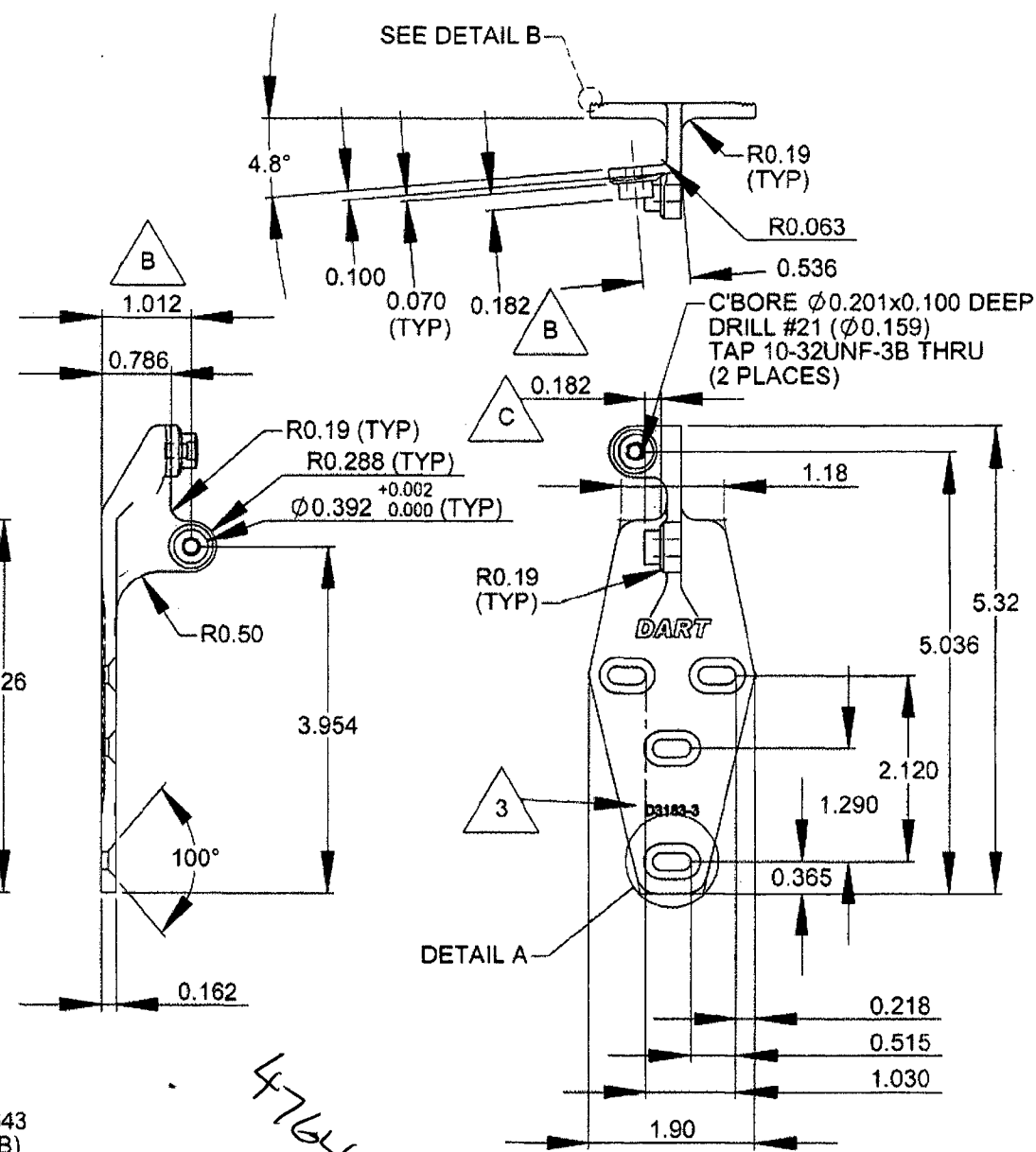
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DATE		REV. C
04.02.17		SHEET 3 OF 4
	TITLE	SCALE
	BRACKET ASSEMBLY	1:2



D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

47647

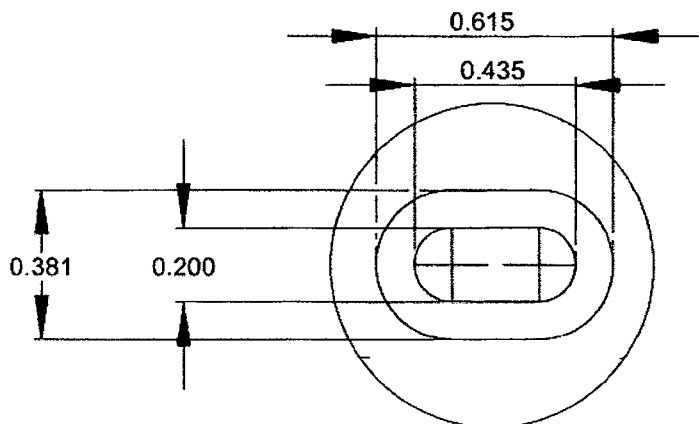
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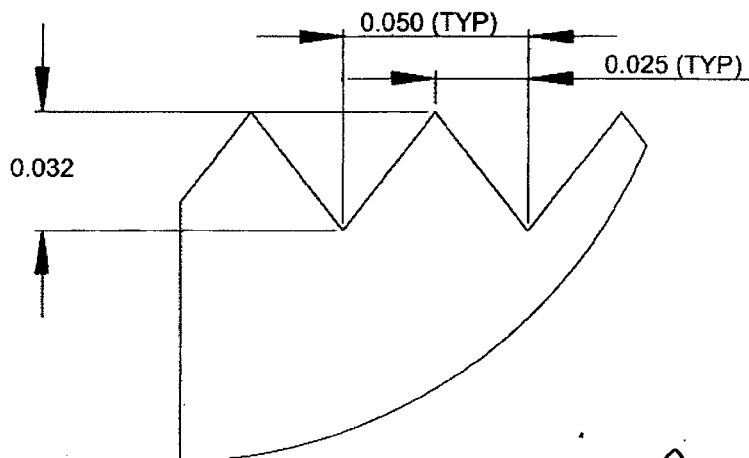


DESIGN #	DRAWN BY P	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 4 OF 4
DATE 04.02.17	TITLE BRACKET ASSEMBLY		SCALE 1:1

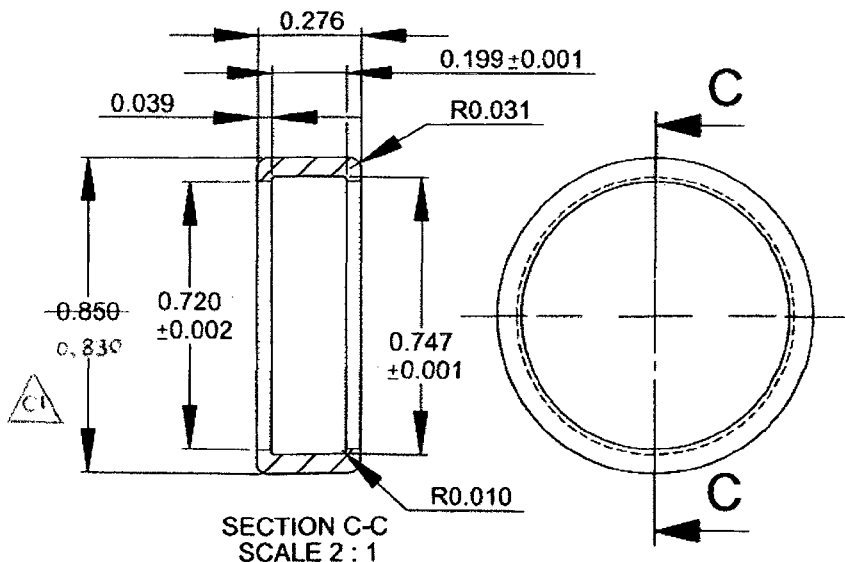


DETAIL A (2 : 1)

RELEASED
04.03.01



DETAIL B (20 : 1)



D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND
D3183-9 CAP

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